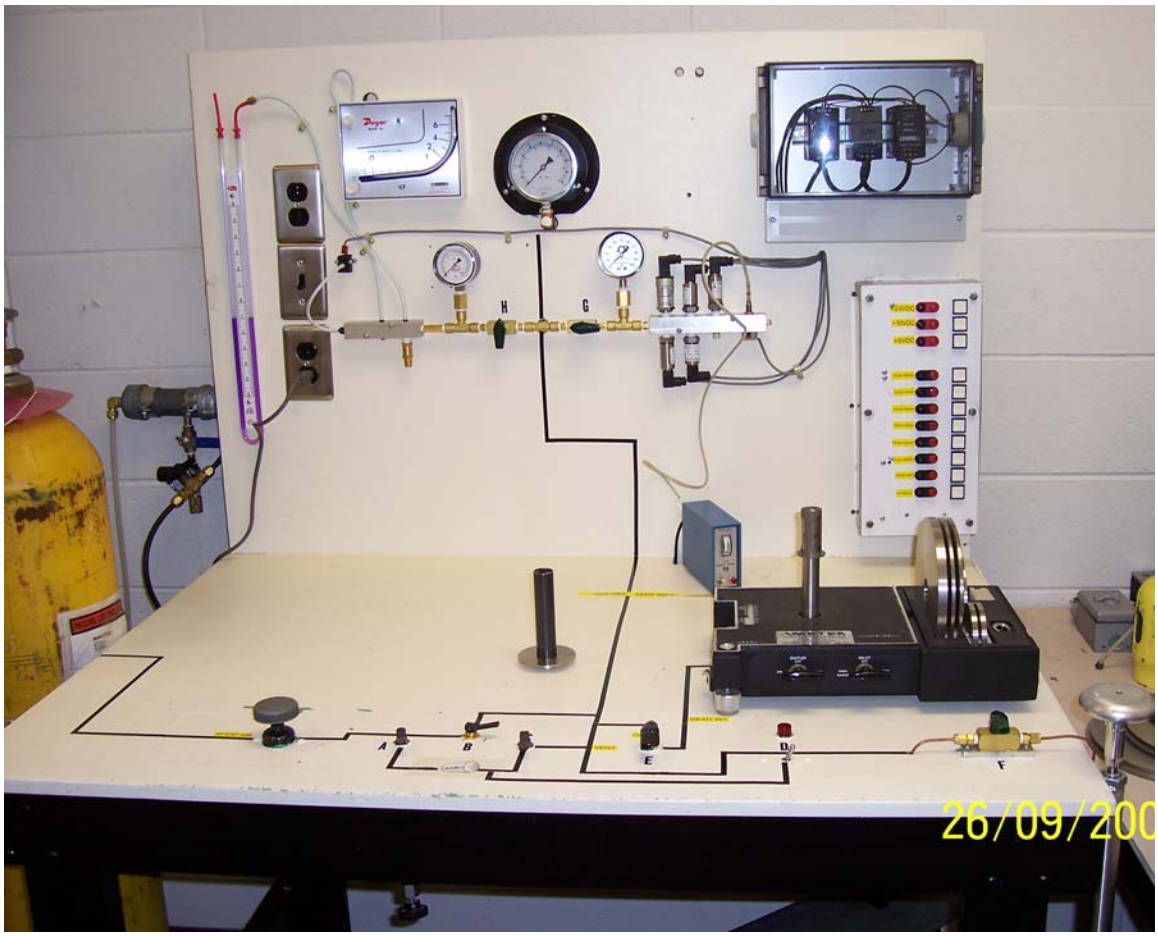
PRESSURE BENCH OPERATING INSTRUCTIONS

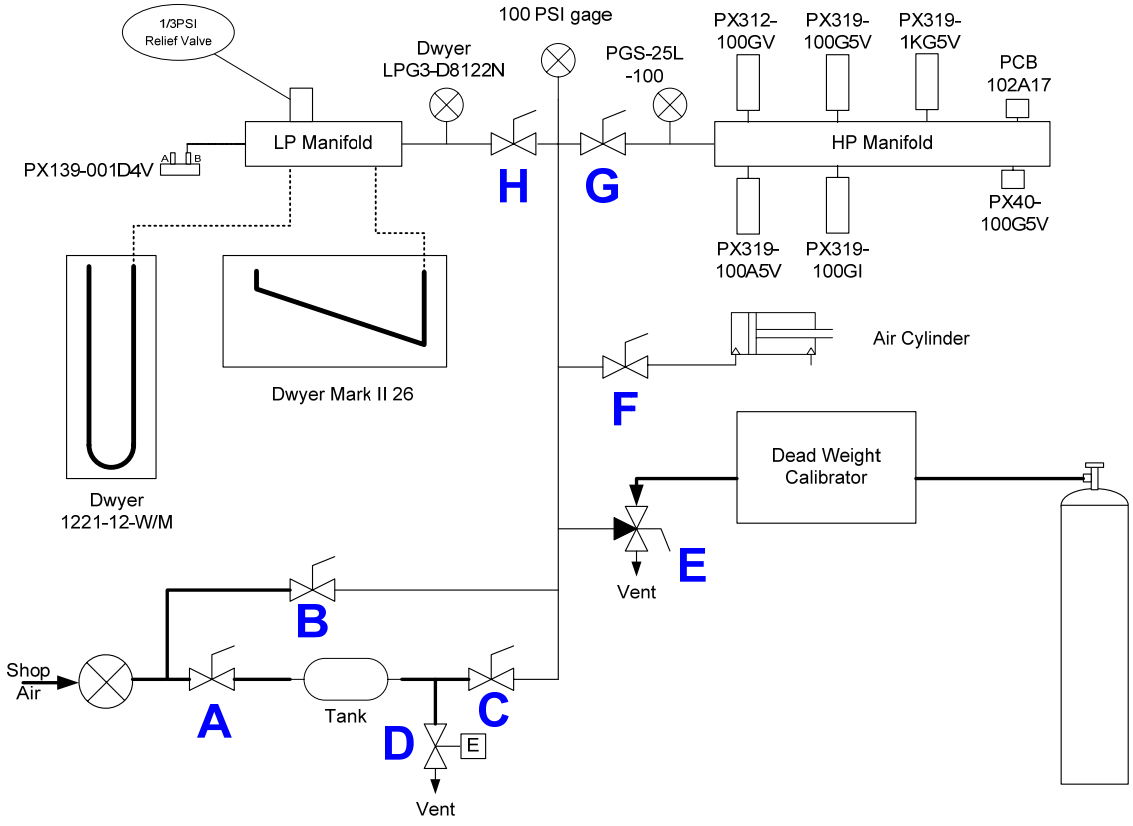


Overview:

The pressure bench system allows the user to apply a variety of calibrated pressures to a variety of high and low pressure transducers. In addition the system has a pressure tank and impulse cylinder to provide for dynamic pressure changes.

Plumbing:

The bench has two air supply systems, a shop air line connected through a regulator, and a high pressure air bottle supplying the dead weight calibrator. For proper operation of the bench both air supplies must be turned on. The following diagram shows the plumbing of the system.



Valve A: This valve supplies pressure from the regulator to the tank.

Valve B: This valve supplies air from the regulator to the transducer manifolds at a low flow rate. This valve should never be open when Valve E is in the deadweight position.

Valve C: When this valve is open the tank is connected to the transducer system. This valve should never be open when valve E is in the deadweight position.

Valve D: This is an electrically operated solenoid valve that will vent the tank when turned on. Caution should be taken that Valve E is not in the deadweight position when using the pressure tank. The high pressure bottle has a limited capacity and excessive flow from the dead weight tester out to atmosphere will drain the bottle quickly.

Valve E: This valve will connect the transducer manifolds to either atmospheric vent or the deadweight tester. When not in use this valve should be in the “closed” position.

Valve F: This valve connects the impulse air cylinder to the pressure manifolds. This valve should never be opened while pressure exists in the system or the cylinder may extend quickly causing injury.

Valve G: This valve allows pressure into the high pressure manifold. Under normal operations this valve is open.

Valve H: This valve allows pressure into the low pressure manifold. This valve should ONLY be open when very low pressures are being measured. There is a low pressure relief valve to prevent damage to the low pressure system, however care must be taken not to open this valve if high pressure is in the system, or damage to the low pressure transducers may result from the high pressure surge.

Dead Weight calibrator:

The dead weight calibrator is a device designed to apply very precise, known pressures. The unit is fed from a high pressure air bottle with a regulator set at 120PSI. The front of the unit contains two valves for operation. Under normal conditions they are set as indicated below.

The system generates pressure through a hanging weight system. The carrier sits on a small ball and hangs freely as indicated in the image below. It is important that the ball NOT be removed from the holder. There are two carriers and weight sets, one for Inches of water(shown hanging on the ball in the image to the left) and one for high pressure (PSI). The low pressure carrier weighs 4" of water and is never to be used with the high pressure weights. The high pressure carrier consists of a cylinder and a weight. The total weight of this combination is 1 PSI, and the pair is never to be separated.

Pressures are generated by adding the appropriate weights to the carrier, and allowing the system to stabilize. Once the system has come to the pressure equal to the dead weights, a slight hissing sound can be heard from air escaping around the ball, and the carrier will balance on the suspended ball.

Transducers:

The system has a number of transducers connected to the high and low pressure manifolds as indicated on the plumbing diagram. These are powered and pre-wired to a jack panel to allow easy connection between the computer data acquisition system and transducer. Care should be taken to make sure that the ground connection of the daq system to the black terminal. Care should also be taken to never connect the 24V power supply to the daq system. Doing so will damage the data acquisition board permanently. Most of the transducers are voltage output, however two are not. The PX312-100GV is a millivolt output transducer, and the PX319-100GI is a 4-20ma current output. To make things easy, this transducer has a 500 ohm resistor placed on its output to allow the computer data acquisition system to be able to read it. When taking reading from this transducer remember to

convert the indicated voltage back into current. The data sheets for each of the transducers are included at the end of this manual.

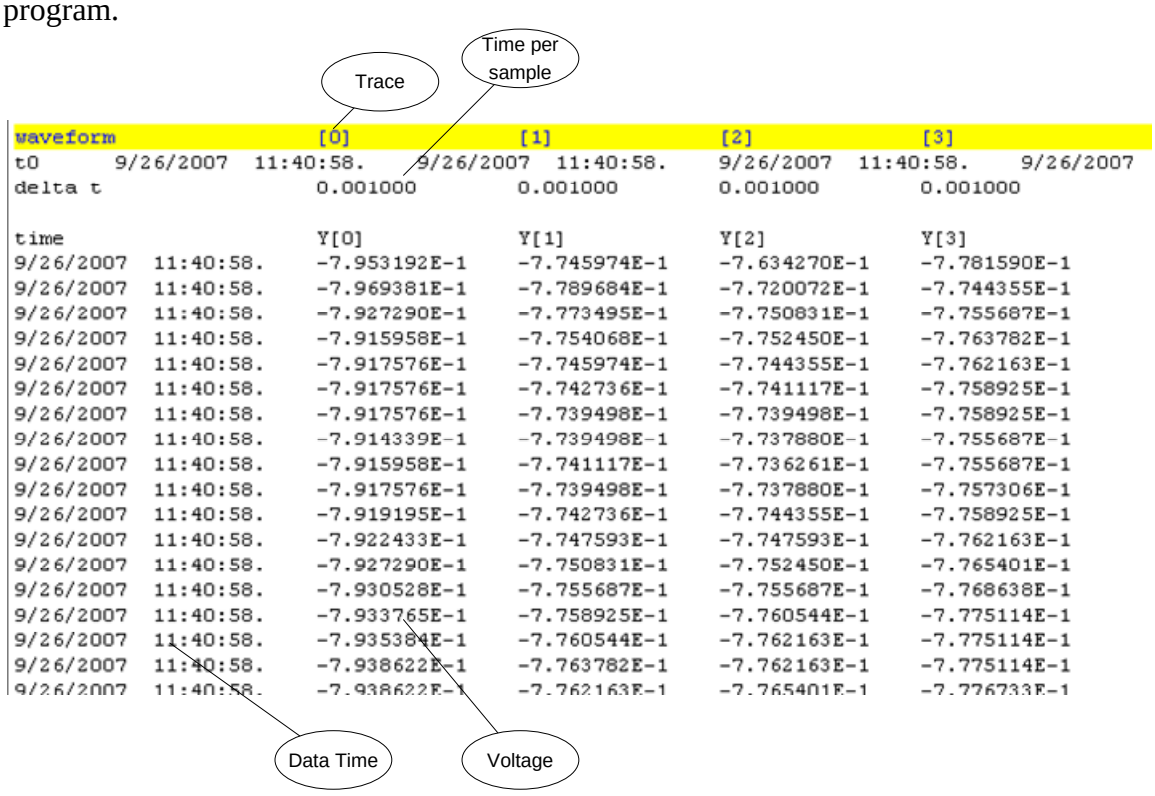
Computer program:

The system is set up with a computer and data acquisition system to acquire data and store it to files. The system has two sections, a static display that shows the voltage of input lines 4 through 7, with both meters and digital readouts. There is a "Save" button to allow the data to be logged to a file. If no file name is entered into the file path box, then you will be prompted for one. If the name exists in the field, then the data will be appended to the existing file. This also saves whatever is in the comment field to that file.

There is also a dynamic portion. This will allow the four channels to be acquired in a high speed mode and displayed to the screen. A field allows you to select an acquisition time between .5 and 10 seconds. If you are satisfied with the trace, a save button will allow you to record the traces to a text file for later analysis.

Data trace file definition:

The file is a tab delimitated file to allow easy import into a graphing or spreadsheet program.



waveform		[0]	[1]	[2]	[3]
t0	9/26/2007 11:40:58.	9/26/2007 11:40:58.		9/26/2007 11:40:58.	9/26/2007
delta t		0.001000	0.001000	0.001000	0.001000
time		Y[0]	Y[1]	Y[2]	Y[3]
9/26/2007	11:40:58.	-7.953192E-1	-7.745974E-1	-7.634270E-1	-7.781590E-1
9/26/2007	11:40:58.	-7.969381E-1	-7.789684E-1	-7.720072E-1	-7.744355E-1
9/26/2007	11:40:58.	-7.927290E-1	-7.773495E-1	-7.750831E-1	-7.755687E-1
9/26/2007	11:40:58.	-7.915958E-1	-7.754068E-1	-7.752450E-1	-7.763782E-1
9/26/2007	11:40:58.	-7.917576E-1	-7.745974E-1	-7.744355E-1	-7.762163E-1
9/26/2007	11:40:58.	-7.917576E-1	-7.742736E-1	-7.741117E-1	-7.758925E-1
9/26/2007	11:40:58.	-7.917576E-1	-7.739498E-1	-7.739498E-1	-7.758925E-1
9/26/2007	11:40:58.	-7.914339E-1	-7.739498E-1	-7.737880E-1	-7.755687E-1
9/26/2007	11:40:58.	-7.915958E-1	-7.741117E-1	-7.736261E-1	-7.755687E-1
9/26/2007	11:40:58.	-7.917576E-1	-7.739498E-1	-7.737880E-1	-7.757306E-1
9/26/2007	11:40:58.	-7.919195E-1	-7.742736E-1	-7.744355E-1	-7.758925E-1
9/26/2007	11:40:58.	-7.922433E-1	-7.747593E-1	-7.747593E-1	-7.762163E-1
9/26/2007	11:40:58.	-7.927290E-1	-7.750831E-1	-7.752450E-1	-7.765401E-1
9/26/2007	11:40:58.	-7.930528E-1	-7.755687E-1	-7.755687E-1	-7.768638E-1
9/26/2007	11:40:58.	-7.933765E-1	-7.758925E-1	-7.760544E-1	-7.775114E-1
9/26/2007	11:40:58.	-7.935384E-1	-7.760544E-1	-7.762163E-1	-7.775114E-1
9/26/2007	11:40:58.	-7.938622E-1	-7.763782E-1	-7.762163E-1	-7.775114E-1
9/26/2007	11:40:58.	-7.938622E-1	-7.762163E-1	-7.765401E-1	-7.776733E-1

MINIATURE VOLTAGE OUTPUT PRESSURE SENSORS
FULLY TEMPERATURE COMPENSATED

PX40 Series
0.5 to 4 Vdc Output

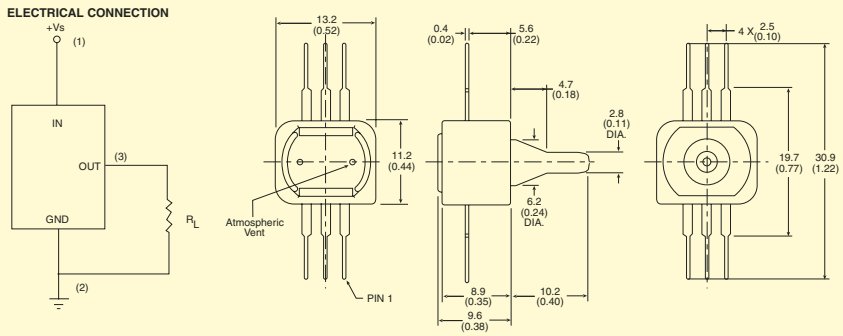
All Ranges $60

PX40-15G5V, $60, shown much larger than actual size.

MADE IN USA

- Smallest Amplified Package
- Small Lightweight Package
- Fully Signal Conditioned
- Temperature Compensated
- Port Designed for O-Ring Interface
- Excellent Media Compatibility
- Wet or Dry Industrial Applications

Dimensions: mm (in)



Typical Applications

- Laboratory Equipment
- Electronic Brake Systems
- Engine Oil Level
- Transmission Fluid Level
- Air Conditioning Systems
- Industrial Fluid Level

SPECIFICATIONS

Excitation: 5 Vdc @10 mA
Output Source Current: 0.5 mA max
Output Sink Current: 1.0 mA max
Hysteresis and Repeatability: 0.15% FS

Span:	Output:	Linearity:
±50 mmHg	4.00 Vdc typical	0.80%
0 to 15	4.00 ±0.11 Vdc	0.20%
0 to 100	4.00 ±0.09 Vdc	0.10%

Null:

±50 mmHg	2.50 ±0.05 Vdc
0 to 15	0.50 ±0.11 Vdc
0 to 100	0.50 ±0.04 Vdc

Operating Temp:
-45 to 125°C (-49 to 257°F)
Compensated Temp:
-45 to 125°C (-49 to 257°F)
Overpressure:

±50 mmHg	±170 mmHg
0 to 15	45 psi
0 to 100	200 psi

Response Time: 1 ms
Gage Type: Silicon
Media Compatibility: Limited to media that will not attack invar, copper, silicon, stainless steel, glass and solder (i.e., air, water, refrigerants, engine fuel)
Vent: Dry gases only
Weight: 5 g (0.18 oz)

ALL MODELS AVAILABLE FOR FAST DELIVERY!

To Order *(Specify Model Number)*

GAGE MODELS (One Port)

RANGE		MODEL NO.	PRICE	COMPATIBLE METERS
±50 mmHg	6.7 kPa	**PX40-50BHG5V**	**$60**	DP24-E, DP25B-E, DP41-E
0 to 15 psi	0 to 1 bar	**PX40-15G5V**	**60**	DP24-E, DP25B-E, DP41-E
0 to 30 psi	0 to 2.1 bar	**PX40-030G5V**	**60**	DP24-E, DP25B-E, DP41-E
0 to 100 psi	0 to 6.9 bar	**PX40-100G5V**	**60**	DP24-E, DP25B-E, DP41-E

ACCESSORY

MODEL NO.	PRICE	DESCRIPTION
ES-2272	**$190**	Reference Book: Handbook of Heating, Ventilation, and Air Conditioning

Ordering Example: PX40-15G5V,** 0 to 15 psi transducer with 0.5 to 4.5 Vdc output, **$60.

LOW-COST AMPLIFIED OUTPUT TRANSDUCER FOR 5 Vdc POWER

PX139 Series

±0.3 to ±30 psi
±0.02 to ±2 bar

All Ranges
$85

1 YEAR WARRANTY — MADE IN USA

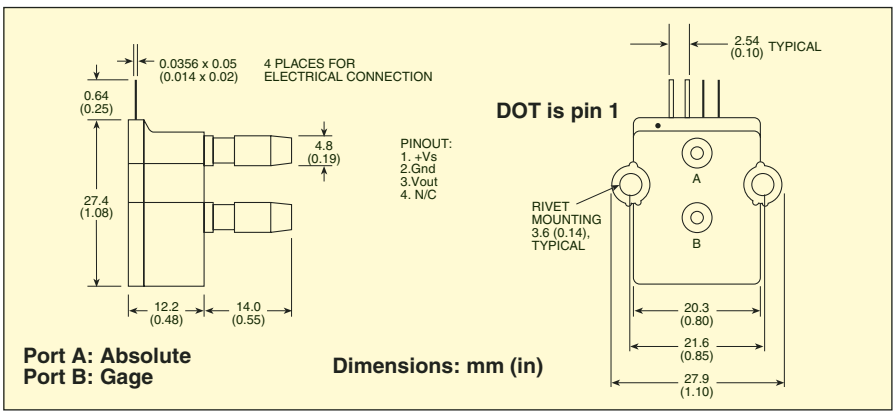
- **Available for Differential, Gage, or Absolute Measurement**
- **Calibrated 4 V Output Span**
- **Precise Temperature Compensation**
- **For Dry Gas**
- **5 V Excitation**

The PX139 Series pressure transducer uses state-of-the-art micro-machined silicon sensors with stress-free packaging techniques to provide highly accurate, temperature-compensated pressure measurements for the most demanding applications. Designed to operate from a 5 Vdc power source, the PX139 provides a calibrated 4 V output span of 0.25 to 4.25 V.

PX139-0.3DV, $85, shown 2.5x larger than actual size.

SPECIFICATIONS

Excitation Voltage: 5 Vdc @ 2 mA
Output: 0.25 to 4.25 Vdc
Span: 4 V ±0.1 V
Linearity and Hysteresis: ±0.1% FS typical, 0.5% max (0.5% typ. 1% max for ±0.3 psi range)
Repeatability: ±0.3% FS
Zero Balance: 2.25 ±0.1 Vdc diff.; 0.25 ±0.1 Vdc abs.
Storage Temperature: -40 to 125°C (-40 to 257°F)
Compensated Temp Range: 0 to 50°C (32 to 122°F)
Zero Temp Effects: ±0.5% FS (±1% FS for 0.3 psi)
Span Temp Effects: ±0.5% FS (±1% FS for 0.3 psi)
Proof Pressure: >3x FS pressure
Burst Pressure: >5x FS pressure
Common Mode Press: 50 psi
Media Compatibility: For use with gases compatible with silicon, glass-filled nylon and alumina ceramic
Mating Connector: CX136-4 (not included), see page C-10



MOST POPULAR MODELS HIGHLIGHTED!

To Order *(Specify Model Number)*

GAGE/DIFFERENTIAL PRESSURE		MODEL NO.	PRICE	COMPATIBLE METERS*
±0.3 psi	0.02 bar	**PX139-0.3D4V**	**$85**	DP25B-E, DP41-E
±1 psi	0.069 bar	**PX139-001D4V**	**85**	DP25B-E, DP41-E
±5 psi	0.34 bar	**PX139-005D4V**	**85**	DP25B-E, DP41-E
±15 psi	1.0 bar	**PX139-015D4V**	**85**	DP25B-E, DP41-E
±30 psi	2.1 bar	**PX139-030D4V**	**85**	DP25B-E, DP41-E
ABSOLUTE PRESSURE RANGES				
0 to 15 psia	0 to 1.0 bar	**PX139-015A4V**	**$85**	DP25B-E, DP41-E
0 to 30 psia	0 to 2.1 bar	**PX139-030A4V**	**85**	DP25B-E, DP41-E

Comes with complete operator's manual.
** See section D for compatible meters.*
Ordering Example: PX139-015A4V,** amplified 0 to 15 psia output transducer, **$85.

ACCESSORY

MODEL NO.	PRICE	DESCRIPTION
AV-1017	**$99**	Reference Book: Mechanics of Aircraft Structures

ALL STAINLESS STEEL TRANSDUCER MULTIMEDIA COMPATIBILITY

HIGH-PERFORMANCE SILICON TECHNOLOGY

PX309 Series

0 to 5 Vdc Output
0-1 to 0-10,000 psi
0-70 mbar to 0-690 bar

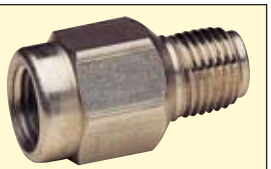
Starts at
$225

- 1, 2, and 5 psi Ranges
- Rugged, Solid State Design
- All Stainless Steel
- High Stability, Low Drift
- 0.25% Accuracy Typical
- RoHS Compliant
- IP65 Protection Class

SPECIFICATIONS

Excitation: 9 to 30 Vdc (<10 mA) (reverse polarity and overvoltage protected)
Output: 0 to 5 Vdc
Accuracy: ±0.25% includes linearity, hysteresis and repeatability
Zero Offset: ±2% FSO; ±4% 1 and 2 psi ranges
Span Setting: ±2% FSO; ±4% 1 and 2 psi ranges
Total Error Band: ±2% FSO, includes linearity, hysteresis, repeatability, thermal hysteresis and thermal errors (except 1 psi = ±4.5% and 2 psi = ±3%)
Long-Term Stability (1 Year): ±0.25% typical
Typical Life: 10 million cycles
Operating Temperature: -40 to 85°C (-40 to 185°F)
Compensated Temperature:
>5 psi Range: -20 to 85°C (-4 to 185°F)
≤5 psi Range: 0 to 50°C (-18 to 122°F)
Proof Pressure:
psia and ≤50 psig: 3x capacity or 20 psi, whichever is greater
≥100 psi: 2x capacity
Burst Pressure: 5x capacity or 25 psi, whichever is greater
Response Time: <1 ms
Shock: 50 g, 11 ms half-sine shock
Vibration: ±20 g
Wetted Parts: 316 SS for all psia ranges and 1 to 50 psig; 17-4 PH SS for ranges 100 to 10,000 psig
Pressure Port: ¼-18 MNPT
Electrical Connections:
PX309: 1.5 m (5') 3-conductor cable
PX319: Mini DIN connector with mating connector included
PX329: Twist-lock connector, mating connector sold separately (PT06V-10-6S)
Weight: 155 g (5.4 oz) max
Note: Units 100 psig and above may be subjected to vacuum on the pressure port without damage
For alternative performance specifications contact Engineering.

Order a snubber to protect your pressure transducer!

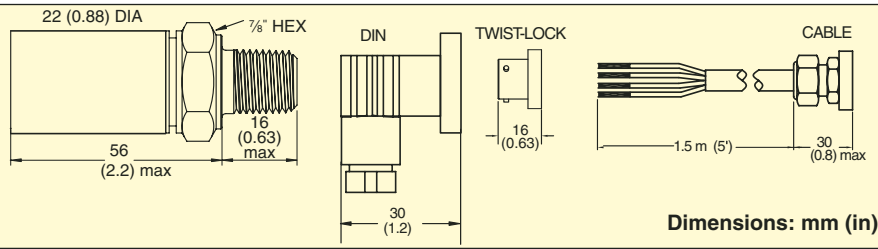


PS-4G, $10, shown actual size.
Snubbers protect sensors from fluid hammers/spikes.

RUGGED, GENERAL PURPOSE TRANSDUCER

5 Vdc Output Wiring

Wiring	Cable	Mini DIN	Twist-Lock
Excitation (+)	Red	Pin 1	Pin A
Excitation (-)	Black	Pin 2	Pin B
Output (+)	White	Pin 3	Pin C
Spare		Pin 4	Pin D
Spare			Pin E
Vent			Pin F



Dimensions: mm (in)

NEW, LOW-PRESSURE RANGES HIGHLIGHTED

To Order *(Specify Model Number)*

RANGE bar	RANGE psi	1.5 m CABLE CONNECTION	PRICE	MINI DIN CONNECTION	PRICE	TWIST-LOCK CONNECTION	PRICE
ABSOLUTE PRESSURE							
0 to 0.34	0 to 5	PX309-005A5V	$325	PX319-005A5V	$325	PX329-005A5V	$350
0 to 1	0 to 15	PX309-015A5V	245	PX319-015A5V	245	PX329-015A5V	295
0 to 2.1	0 to 30	PX309-030A5V	245	PX319-030A5V	245	PX329-030A5V	295
0 to 3.4	0 to 50	PX309-050A5V	245	PX319-050A5V	245	PX329-050A5V	295
0 to 6.9	0 to 100	PX309-100A5V	245	PX319-100A5V	245	PX329-100A5V	295
0 to 14	0 to 200	PX309-200A5V	245	PX319-200A5V	245	PX329-200A5V	295
0 to 21	0 to 300	PX309-300A5V	245	PX319-300A5V	245	PX329-300A5V	295
GAGE PRESSURE							
0 to 0.07	0 to 1	PX309-001G5V	$345	PX319-001G5V	$345	PX329-001G5V	$370
0 to 0.14	0 to 2	PX309-002G5V	325	PX319-002G5V	325	PX329-002G5V	350
0 to 0.34	0 to 5	PX309-005G5V	300	PX319-005G5V	300	PX329-005G5V	325
0 to 1	0 to 15	PX309-015G5V	225	PX319-015G5V	225	PX329-015G5V	275
0 to 2.1	0 to 30	PX309-030G5V	225	PX319-030G5V	225	PX329-030G5V	275
0 to 3.4	0 to 50	PX309-050G5V	225	PX319-050G5V	225	PX329-050G5V	275
0 to 6.9	0 to 100	PX309-100G5V	225	PX319-100G5V	225	PX329-100G5V	275
0 to 10	0 to 150	PX309-150G5V	225	PX319-150G5V	225	PX329-150G5V	275
0 to 14	0 to 200	PX309-200G5V	225	PX319-200G5V	225	PX329-200G5V	275
0 to 21	0 to 300	PX309-300G5V	225	PX319-300G5V	225	PX329-300G5V	275
0 to 34	0 to 500	PX309-500G5V	225	PX319-500G5V	225	PX329-500G5V	275
0 to 69	0 to 1000	PX309-1KG5V	225	PX319-1KG5V	225	PX329-1KG5V	275
0 to 138	0 to 2000	PX309-2KG5V	225	PX319-2KG5V	225	PX329-2KG5V	275
0 to 207	0 to 3000	PX309-3KG5V	225	PX319-3KG5V	225	PX329-3KG5V	275
0 to 345	0 to 5000	PX309-5KG5V	225	PX319-5KG5T	225	PX329-5KG5V	275
0 to 517	0 to 7500	PX309-7.5KG5V	225	PX319-7.5KG5V	225	PX329-7.5KG5V	275
0 to 690	0 to 10,000	PX309-10KG5V	225	PX319-10KG5V	225	PX329-10KG5V	275

ACCESSORIES

MODEL NO.	PRICE	DESCRIPTION
-NIST	$75.00	5-point NIST-traceable calibration (must be ordered as a suffix with new transducer)
CAL-3	150.00	Recalibration: 5-point NIST traceable
PT06V-10-6S	26.50	Mating twist-lock connector for PX329
CA-39-4PC22-5	90.00	Mating twist-lock connector with 1.5 m (5') cable for PX329
CX5302	15.00	Extra mating mini DIN connector for PX319
ES-2272	190.00	Reference Book: Handbook of Heating, Ventilation, and Air Conditioning

Comes with certificate of conformance to specifications.

Ordering Examples: PX309-100G5V,** 100 psi gage pressure transducer with 0 to 5 Vdc output and 1 m cable termination, **$225.** **PX319-015A5V,** 15 psi absolute pressure transducer with 0 to 5 Vdc output and mini DIN termination, **$300.** **PX329-3KG5V,** 3000 psi gage pressure transducer with 0 to 5 Vdc output and twist-lock termination, **$275.** Mating connector sold separately; order **PT06V-10-6S, $26.50.

ALL STAINLESS STEEL TRANSDUCER MULTIMEDIA COMPATIBILITY

HIGH-PERFORMANCE SILICON TECHNOLOGY

NEW®

PX309 Series

4 to 20 mA Output
0-1 to 0-10,000 psi
0-70 mbar to 0-690 bar

Starts at
$225

CE RoHS OMEGADYNE

- 1, 2, and 5 psi Ranges
- Rugged, Solid State Design
- All Stainless Steel
- High Stability, Low Drift
- 0.25% Accuracy Typical
- RoHS Compliant
- IP65 Protection Class

Engineered from 1 to 10,000 psi.

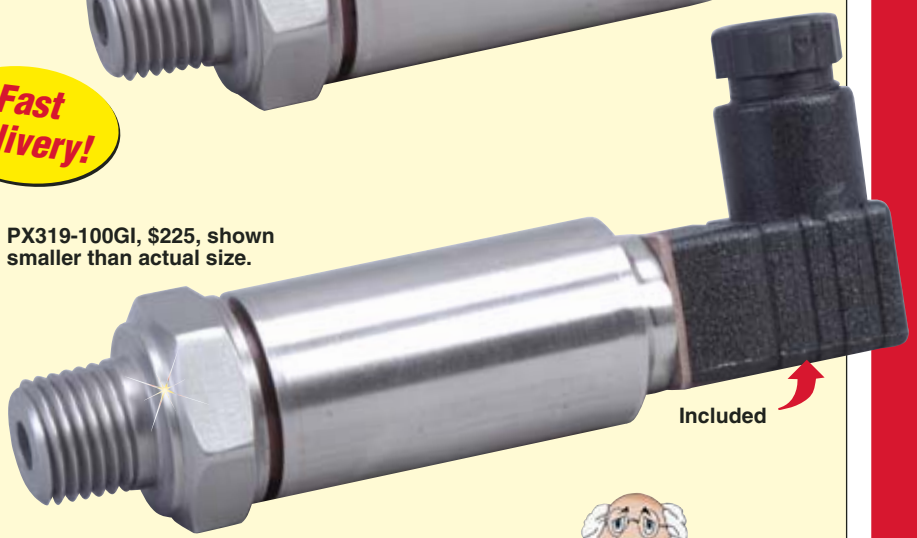
New Low Ranges: 1, 2, and 5 psi.

PX309-100GI, $225, shown smaller than actual size.

PX329-100GI, $275, shown smaller than actual size.

Fast Delivery!

PX319-100GI, $225, shown smaller than actual size.



Included

SPECIFICATIONS

Excitation: 9 to 30 Vdc (reverse polarity and overvoltage protected)
Output: 4 to 20 mA
Accuracy: ±0.25% (includes linearity, hysteresis and repeatability)
Zero Offset: ±2% FSO, (±4% 1 and 2 psi)
Span Setting: ±2% FSO, (±4% 1 and 2 psi)
Total Error Band: ±2% (except 1 psi = ±4.5% and 2 psi = ±3%) FSO, includes linearity, hysteresis, repeatability, thermal hysteresis and thermal errors
Long-Term Stability (1 Year): ±0.25% typical
Typical Life: 10 million cycles
Operating Temperature: -40 to 85°C (-40 to 185°F)
Compensated Temperature:
>5 psi Range: -20 to 85°C (-4 to 185°F)
≤5 psi Range: 0 to 50°C (-18 to 122°F)
Proof Pressure:
psia and ≤50 psig: 3x capacity or 20 psi, whichever is greater
≥100 psi: 2x capacity
Burst Pressure: 500% capacity or 25 psi, whichever is greater
Response Time: <1 ms
Shock: 50 g, 11 ms half-sine shock
Vibration: ±20 g

Wetted Parts: 316 SS for all psia ranges and 1 to 50 psig; 17-4 PH SS for ranges 100 to 10,000 psig
Pressure Port: ¼-18 MNPT
Electrical Connections:
PX309: 1.5 m (5') 2-conductor cable
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PX329: Twist-lock connector, mating connector sold separately (PT06V-10-6S)
Weight: 155 g (5.4 oz) max
Note: Units 100 psig and above may be subjected to vacuum on the pressure port without damage
For alternative performance specifications, contact Engineering.

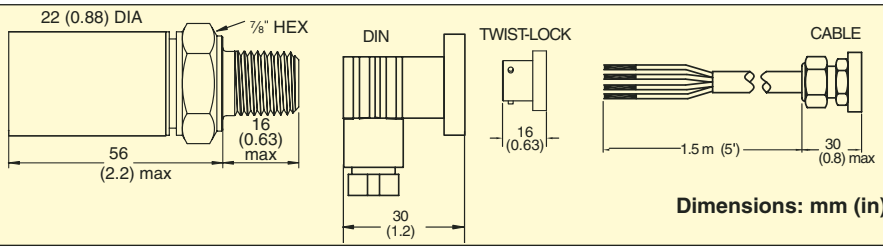
Order a snubber to protect your pressure transducer!

PS-4G, $10, shown actual size.
Snubbers protect sensors from fluid hammers/spikes.

RUGGED, GENERAL PURPOSE TRANSDUCER

mA Output Wiring

Wiring	Cable	Mini DIN	Twist-Lock
Supply (+)	Red	Pin 1	Pin A
Supply (-)	Black	Pin 2	Pin B
Spare		Pin 3	Pin C
Spare		Pin 4	Pin D
Spare			Pin E
Vent			Pin F



Dimensions: mm (in)

NEW, LOW-PRESSURE RANGES HIGHLIGHTED

To Order *(Specify Model Number)*

RANGE bar	RANGE psi	1.5 m CABLE CONNECTION	PRICE	MINI DIN CONNECTION	PRICE	TWIST-LOCK CONNECTION	PRICE
ABSOLUTE PRESSURE							
0 to 0.34	0 to 5	**PX309-005AI**	**$325**	**PX319-005AI**	**$325**	**PX329-005AI**	**$350**
0 to 1	0 to 15	**PX309-015AI**	**245**	**PX319-015AI**	**300**	**PX329-015AI**	**325**
0 to 2.1	0 to 30	**PX309-030AI**	**245**	**PX319-030AI**	**300**	**PX329-030AI**	**325**
0 to 3.4	0 to 50	**PX309-050AI**	**245**	**PX319-050AI**	**300**	**PX329-050AI**	**325**
0 to 6.9	0 to 100	**PX309-100AI**	**245**	**PX319-100AI**	**300**	**PX329-100AI**	**325**
0 to 14	0 to 200	**PX309-200AI**	**245**	**PX319-200AI**	**300**	**PX329-200AI**	**325**
0 to 21	0 to 300	**PX309-300AI**	**245**	**PX319-300AI**	**300**	**PX329-300AI**	**325**
GAGE PRESSURE							
0 to 0.07	0 to 1	**PX309-001GI**	**$345**	**PX319-001GI**	**$345**	**PX329-001GI**	**$370**
0 to 0.14	0 to 2	**PX309-002GI**	**325**	**PX319-002GI**	**325**	**PX329-002GI**	**350**
0 to 0.34	0 to 5	**PX309-005GI**	**300**	**PX319-005GI**	**300**	**PX329-005GI**	**300**
0 to 1	0 to 15	**PX309-015GI**	**225**	**PX319-015GI**	**225**	**PX329-015GI**	**275**
0 to 2.1	0 to 30	**PX309-030GI**	**225**	**PX319-030GI**	**225**	**PX329-030GI**	**275**
0 to 3.4	0 to 50	**PX309-050GI**	**225**	**PX319-050GI**	**225**	**PX329-050GI**	**275**
0 to 6.9	0 to 100	**PX309-100GI**	**225**	**PX319-100GI**	**225**	**PX329-100GI**	**275**
0 to 10	0 to 150	**PX309-150GI**	**225**	**PX319-150GI**	**225**	**PX329-150GI**	**275**
0 to 14	0 to 200	**PX309-200GI**	**225**	**PX319-200GI**	**225**	**PX329-200GI**	**275**
0 to 21	0 to 300	**PX309-300GI**	**225**	**PX319-300GI**	**225**	**PX329-300GI**	**275**
0 to 34	0 to 500	**PX309-500GI**	**225**	**PX319-500GI**	**225**	**PX329-500GI**	**275**
0 to 69	0 to 1000	**PX309-1KGI**	**225**	**PX319-1KGI**	**225**	**PX329-1KGI**	**275**
0 to 138	0 to 2000	**PX309-2KGI**	**225**	**PX319-2KGI**	**225**	**PX329-2KGI**	**275**
0 to 207	0 to 3000	**PX309-3KGI**	**225**	**PX319-3KGI**	**225**	**PX329-3KGI**	**275**
0 to 345	0 to 5000	**PX309-5KGI**	**225**	**PX319-5KGI**	**225**	**PX329-5KGI**	**275**
0 to 517	0 to 7500	**PX309-7.5KGI**	**225**	**PX319-7.5KGI**	**225**	**PX329-7.5KGI**	**275**
0 to 690	0 to 10,000	**PX309-10KGI**	**225**	**PX319-10KGI**	**225**	**PX329-10KGI**	**275**

Comes with certificate of conformance to specifications.

Ordering Examples: PX309-100GI, *100 psi gage pressure transducer with 4 to 20 mA output and 1.5 m cable termination,* ***$225. PX319-015AI,*** *15 psi absolute pressure transducer with 4 to 20 mA output and mini DIN termination,* ***$300. PX329-3KGI,*** *3000 psi gage pressure transducer with 4 to 20 mA output and twist-lock termination,* ***$275.*** *Mating connector sold separately; order* ***PT06V-10-6S, $26.50.***

ACCESSORIES

MODEL NO.	PRICE	DESCRIPTION
-NIST	**$75.00**	5-point NIST-traceable calibration (must be ordered as a suffix with new transducer)
CAL-3	**150.00**	Recalibration: 5-point NIST traceable
PT06V-10-6S	**26.50**	Mating twist-lock connector for PX329
CA-39-4PC22-5	**90.00**	Mating twist-lock connector with 1.5 m (5') cable for PX329
CX5302	**15.00**	Extra mating mini DIN connector for PX319
ES-2272	**190.00**	Reference Book: Handbook of Heating, Ventilation, and Air Conditioning

GENERAL PURPOSE 100 MILLIVOLT OUTPUT PRESSURE SENSOR

AVAILABLE IN ABSOLUTE AND GAGE MODELS

PX302/PX312 Series

15 to 10,000 psi
1 to 690 Bar

Starts at
$215

3 YEAR WARRANTY · MADE IN USA · CE

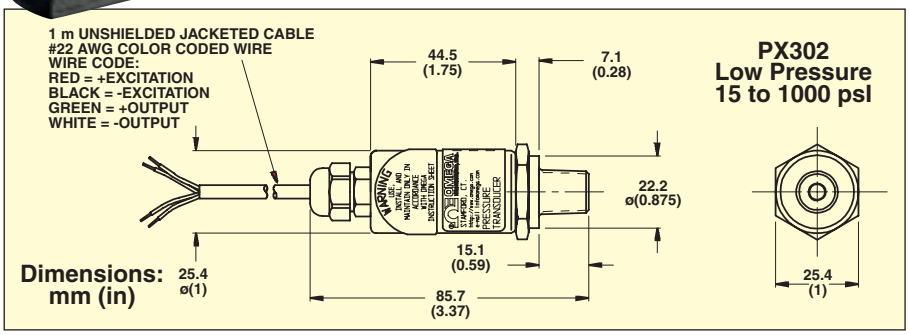
PX312-100GV, $235, DIN connector included.

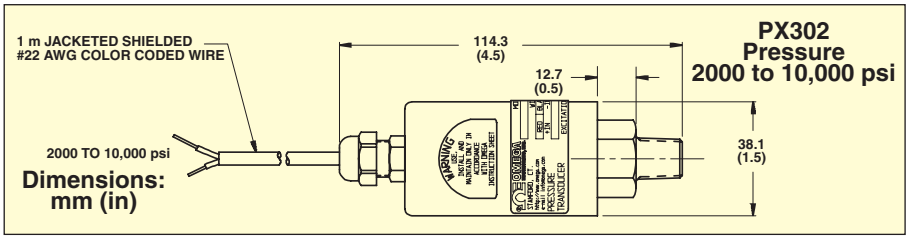
PX302-015GV, $215, shown with DP41-S meter, $545, and PS-4G snubber, $10. Shown smaller than actual size.

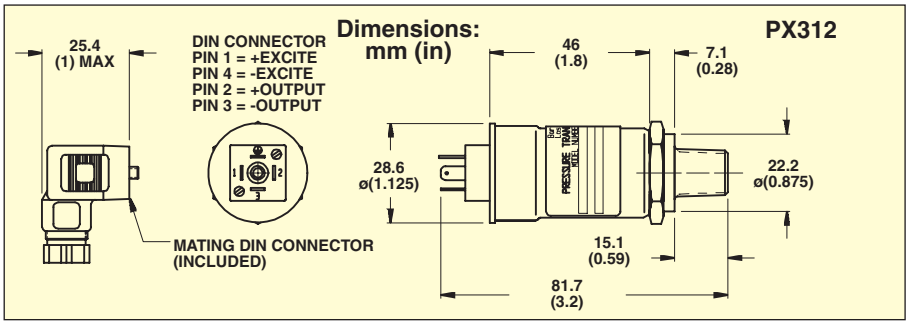
- Rugged All Stainless Steel Construction
- Integral Strain Relief for Cable or DIN Connector
- High Sensitivity 10 mV/V Output
- NEMA 3 Enclosure

SPECIFICATIONS

Excitation: 10 Vdc (5 to 15 Vdc limits)
Output: 10 mV/V ratiometric
100 mV ±1 mV @ 10 Vdc
Accuracy: 0.25% BFSL
(linearity, hysteresis, repeatability)
Zero Balance: 0 mV ±2 mV
Input Resistance: 15,000 Ω maximum
Long-Term Stability: ±0.5% FS
Typical Life: 100 million cycles
Operating Temperature:
-18 to 71°C (0 to 160°F)





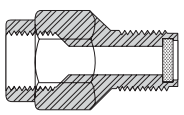


GENERAL PURPOSE PRESSURE SENSOR

Compensated Temperature:
-1 to 71°C (30 to 160°F)
Total Thermal Effects: ±1% FS max
Proof Pressure: 200%, 13,000 psi max
Response Time: 1 ms
Shock: 50 g @ 11 ms
Vibration: 15 g 10 to 2000 Hz
Wetted Parts: 17-4 PH and 300 Series stainless steel
Pressure Port: ¼ NPT male
Electrical Connection:
PX302: 1 m (3') 4-conductor unshielded cable
PX312: Miniature DIN connector (included)
Weight: 131 g (4.6 oz) to 1000 psi
190 g (6.7 oz) from 1000 psi

PX302-015GV, $215, shown with PS-4G snubber, $10. Shown approximately actual size.

Snubbers protect sensors from fluid spikes/hammers!



¼ NPT Pressure Snubbers: $10
PS-4G = Gas
PS-4E = Lt Oil
PS-4D = Dense Lq

MOST POPULAR MODELS HIGHLIGHTED!

To Order *(Specify Model Number)*

psi	bar	CABLE STYLE	PRICE	CONNECTOR STYLE	PRICE	COMPATIBLE METERS*
GAGE PRESSURE RANGES						
0 to 15	0 to 1.0	**PX302-015GV**	**$215**	**PX312-015GV**	**$235**	DP25B-S, DP41-S, DPiS Series
0 to 30	0 to 2.1	**PX302-030GV**	**215**	**PX312-030GV**	**235**	DP25B-S, DP41-S, DPiS Series
0 to 50	0 to 3.4	**PX302-050GV**	**215**	**PX312-050GV**	**235**	DP25B-S, DP41-S, DPiS Series
0 to 100	0 to 6.9	**PX302-100GV**	**215**	**PX312-100GV**	**235**	DP25B-S, DP41-S, DPiS Series
0 to 200	0 to 13.8	**PX302-200GV**	**215**	**PX312-200GV**	**235**	DP25B-S, DP41-S, DPiS Series
0 to 300	0 to 20.7	**PX302-300GV**	**215**	**PX312-300GV**	**235**	DP25B-S, DP41-S, DPiS Series
0 to 500	0 to 34.5	**PX302-500GV**	**215**	**PX312-500GV**	**235**	DP25B-S, DP41-S, DPiS Series
0 to 1000	0 to 69.0	**PX302-1KGV**	**215**	**PX312-1KGV**	**235**	DP25B-S, DP41-S, DPiS Series
0 to 2000	0 to 138	**PX302-2KGV**	**215**	**PX312-2KGV**	**235**	DP25B-S, DP41-S, DPiS Series
0 to 3000	0 to 207	**PX302-3KGV**	**215**	**PX312-3KGV**	**235**	DP25B-S, DP41-S, DPiS Series
0 to 4000	0 to 276	**PX302-4KGV**	**215**	**PX312-4KGV**	**235**	DP25B-S, DP41-S, DPiS Series
0 to 5000	0 to 345	**PX302-5KGV**	**215**	**PX312-5KGV**	**235**	DP25B-S, DP41-S, DPiS Series
0 to 7500	0 to 517	**PX302-7.5KGV**	**215**	**PX312-7.5KGV**	**235**	DP25B-S, DP41-S, DPiS Series
0 to 10,000	0 to 690	**PX302-10KGV**	**215**	**PX312-10KGV**	**235**	DP25B-S, DP41-S, DPiS Series
ABSOLUTE PRESSURE RANGES						
0 to 15	0 to 1.0	**PX302-015AV**	**$215**	**PX312-015AV**	**$235**	DP25B-S, DP41-S, DPiS Series
0 to 30	0 to 2.1	**PX302-030AV**	**215**	**PX312-030AV**	**235**	DP25B-S, DP41-S, DPiS Series
0 to 50	0 to 3.4	**PX302-050AV**	**215**	**PX312-050AV**	**235**	DP25B-S, DP41-S, DPiS Series
0 to 100	0 to 6.9	**PX302-100AV**	**215**	**PX312-100AV**	**235**	DP25B-S, DP41-S, DPiS Series
0 to 200	0 to 13.8	**PX302-200AV**	**215**	**PX312-200AV**	**235**	DP25B-S, DP41-S, DPiS Series
0 to 300	0 to 20.7	**PX302-300AV**	**215**	**PX312-300AV**	**235**	DP25B-S, DP41-S, DPiS Series

*Comes with complete operator's manual. * See section D for compatible meters.*
Ordering Example: PX302-050GV,** pressure transducer with 50 psig full scale rating and **PS-4E** pressure snubber for water and light oils, $215 + 10 = **$225.

ACCESSORIES

MODEL NO.	PRICE	DESCRIPTION
PS-4E	**$10**	Pressure snubber for water or light oils
PS-4D	**10**	Pressure snubber for dense liquids or oils
PS-4G	**10**	Pressure snubber for gases and steam
MS-1808	**$125**	Reference Book: Plant Engineer's Handbook